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(54) Title: USE OF AN L-ASCORBIC ACID SALT TO PREPARE A PHARMACEUTICAL COMPOSITION FOR OPHTHALMIC TOPICAL USE CAPABLE OF IMPROVING THE LEVEL OF L-ASCORBIC ACID IN THE EYE

(57) Abstract: Use of a salt of L-ascorbic acid with a pharmaceutically acceptable organic base to prepare a pharmaceutical composition, for ophthalmic topical use, capable of improving the level of L-ascorbic acid in a human eye.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K31/375 A61P27/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, CHEM ABS Data, BIOSIS, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02 01954 A (TRUSTEES OF THE UNIVERSITY OF) 10 January 2002 (2002-01-10) claims 1-17 ---	1, 4
X	EP 0 781 547 A (CHEMEDICA SA) 2 July 1997 (1997-07-02) claims 1-18 ---	1, 4
A	US 4 620 979 A (SCHACHAR RONALD A) 4 November 1986 (1986-11-04) ---	
A	DE 197 29 879 A (MANN GERHARD CHEM PHARM FAB) 14 January 1999 (1999-01-14) ---	
A	US 5 817 630 A (BOTTONI DON J ET AL) 6 October 1998 (1998-10-06) --/-	

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Patent family members are listed in annex.

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International Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 523 316 A (GAN OWEN ET AL) 4 June 1996 (1996-06-04) -----	
A	US 4 886 815 A (SCHACHAR RONALD A) 12 December 1989 (1989-12-12) -----	
A	DE 31 33 003 A (GAURI KAILASH KUMAR) 10 March 1983 (1983-03-10) -----	
A	PATENT ABSTRACTS OF JAPAN vol. 007, no. 095 (C-163), 23 August 1983 (1983-08-23) & JP 58 021614 A (ESUESU SEIYAKU KK), 8 February 1983 (1983-02-08) abstract -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 03/02258

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0201954	A	10-01-2002	AU WO US	7320201 A 0201954 A1 2002019372 A1		14-01-2002 10-01-2002 14-02-2002
EP 0781547	A	02-07-1997	IT AT CA DE DE DK EP ES JP PT US	MI952744 A1 216221 T 2193543 A1 69620724 D1 69620724 T2 781547 T3 0781547 A1 2175020 T3 9216826 A 781547 T 5880107 A		23-06-1997 15-05-2002 23-06-1997 23-05-2002 21-11-2002 12-08-2002 02-07-1997 16-11-2002 19-08-1997 30-09-2002 09-03-1999
US 4620979	A	04-11-1986		NONE		
DE 19729879	A	14-01-1999	DE AT DE WO EP JP	19729879 A1 209897 T 59802356 D1 9902130 A2 0994693 A2 2001509476 T		14-01-1999 15-12-2001 17-01-2002 21-01-1999 26-04-2000 24-07-2001
US 5817630	A	06-10-1998	CA	2200501 A1		20-09-1998
US 5523316	A	04-06-1996	AU AU CA EP JP WO	695937 B2 2864395 A 2192318 A1 0766553 A1 10502085 T 9600055 A1		27-08-1998 19-01-1996 04-01-1996 09-04-1997 24-02-1998 04-01-1996
US 4886815	A	12-12-1989	US US US	4593467 A 4624957 A 4886795 A		10-06-1986 25-11-1986 12-12-1989
DE 3133003	A	10-03-1983	DE	3133003 A1		10-03-1983
JP 58021614	A	08-02-1983	JP JP	1029767 B 1685737 C		14-06-1989 11-08-1992